



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

NAKAJYO, Shinsuke et al.

Serial No.: 09/686,958

Filed: October 12, 2000

Group Art Unit: 2824

Examiner: Adam Pyonin

P.T.O. Confirmation No.: 5708

For. MANUFACTURE OF WAFER LEVEL SEMICONDUCTOR DEVICE AND  
SEMICONDUCTOR DEVICE

REQUEST FOR RECONSIDERATION

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 20231

Date: June 11, 2003

Sir:

Reconsideration of the rejections contained in the Office Action dated March 11, 2003, in view of the following detailed comments are respectfully requested.

In the Office Action, independent claims 1 and 2 were rejected under 35 U.S.C. §103(a) as being unpatentable over the patent to Morgan et al in view of the patents to Glenn et al and Corbett. In addition, dependent claim 4 was rejected under 35 U.S.C. §103(a) as being unpatentable over the patents to Glenn et al and Corbett and dependent claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over the patents to Morgan et al, Glenn et al and Corbett.

In making the initial rejection, it was asserted that the cited Morgan et al patent

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claim 4  
is ind.

teaches the method of manufacturing a wafer level semiconductor device as claimed except for (1) the first and second markings being at the rear surface of the wafer and for (2) sealing the front surface of the wafer with a resin material. The patent to Corbett was then asserted to supply the teaching deficiency with respect to the former (1) and the patent to Glenn et al was asserted to supply the teaching deficiency with respect to the latter (2). Reconsideration of these rejections in view of the following comments is respectfully requested.

It is submitted that the patents to Morgan et al, Glenn et al and Corbett, whether taken singly or in combination, do not teach or suggest the subject matter defined by claims 1, 2, 4 and 5. More particularly with respect to independent claims 1 and 2, it is submitted that the Glenn et al patent, among other things, does not supply the noted teaching deficiency of the Morgan et al patent. The patent to Glenn et al does not disclose sealing a front surface of a wafer, but rather discloses sealing a substrate 13 as is specifically shown in Fig. 3A thereof. Chips 30 mounted on the substrate 13 are already diced when the chips 30 are sealed with resin. Therefore, it is submitted that the Glenn et al patent is not in the same field of endeavor as the Morgan et al patent and therefore one of ordinary skill in the art would not be led to combine their respective teachings.

disagree  
substrate not diced  
in Glenn necessary

It is further submitted that the Corbett patent, among other things, also does not supply the noted teaching deficiency of the Morgan et al patent. The Corbett patent teaches does not disclose marking on a wafer, but rather teaches marking on a chip. Thus, while the Morgan et al patent teaches marking a wafer, the Corbett patent teaches marking to a chip. Therefore, it is submitted that one of ordinary skill in the art also would not be led to combine the respective teachings of the Morgan et al and the Corbett patents.

disagree

entire wafer lin 47 col. 4

In addition to the above, it is to be particularly noted that none of the cited patents to Morgan et al, Glenn et al, nor Corbett patents disclose marking a rear surface of a wafer. Such is an important feature of the methods for manufacturing wafer level semiconductor devices as presently claimed.

disagree

Corbett lin 10 col. 5

Regarding the subject matter of claims 4 and 5, it is to be noted that the ribbon disclosed in the Corbett patent is an "ink ribbon" which just supplies ink. It is submitted that such a ribbon is completely different from the resin sheet as defined by present claim 4. Among other things, the ribbon according to the Corbett patent does not have any information, while the resin sheet as claimed has markings indicating positions of chips on a wafer.

Glenn v. Corbett

Corbett  
for rear side  
position

Glenn provides encapsulant 42  
and blue wafer  
mounting tabs lin 44-45  
lin 28 col. 7

For the reasons stated above, withdrawal of the rejection under 35 U.S.C. §103(a) and allowance of claims 1, 2, 4 and 5 over the cited patents are respectfully requested.

Further, dependent claim 3 was rejected under 35 U.S.C. §103(a) as being unpatentable over the same patents to Morgan et al, Glenn et al and Corbett as applied in the previous rejection in view of the patent to Ohgiyama. Reconsideration of this rejection in view of the following comments is respectfully requested.

The above remarks relative to the collective teaching deficiencies of the patents to Morgan et al, Glenn et al and Corbett are reiterated with regard to this rejection. It is submitted that the cited patent to Ohgiyama does not supply these teaching deficiencies with respect to independent claims 1 and 2 and thus does not render obvious the subject matter of dependent claim 3.

For the reasons stated above, withdrawal of the rejection under 35 U.S.C. §103(a) and allowance of claim 3 over the cited patents are respectfully requested.

In view of the foregoing, it is submitted that the subject application is now in condition for allowance and early notice to that effect is earnestly solicited.

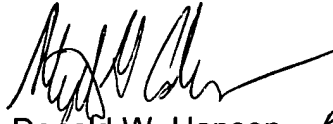
In the event this paper is not timely filed, the undersigned hereby petitions for an appropriate extension of time. The fee for this extension may be charged to Deposit

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Account No. 01-2340, along with any other additional fees which may be required with respect to this paper.

Respectfully submitted,

ARMSTRONG, WESTERMAN & HATTORI, LLP



Donald W. Hanson *Reg. No. 32, 878*  
Attorney for Applicants  
Reg. No. 27,133

Atty. Docket No. 001344  
Suite 1000, 1725 K Street, N.W.  
Washington, D.C. 20006  
(202) 659-2930



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